

### **REMARKS**

Claims 5, 6, 8, 9, 11-13, 16, 19, 21-27, 31, 34, and 36-40 have been amended. Claims 1-4 have been cancelled. Claims 5-40 are currently pending in the application.

By this amendment, Applicant has corrected the specification to correspond with the replacement drawings filed on December 16, 2003.

The Examiner rejected claims 1-4 under 35 USC § 102(b) as being anticipated by Berger et al. (4,453,177; hereinafter "Berger"). This rejection is now moot in light of the cancellation of claims 1-4.

The Examiner rejected claims 5, 6, 8-9, 11-17 and 26-32 under 35 USC § 102(b) as being anticipated by Berger. The Examiner rejected claims 22-25 and 37-40 under 35 USC § 102(b) as being anticipated by Fossum et al. (5,949,483; hereinafter "Fossum"). And finally, the Examiner rejected claims 7, 10, 18-21 and 33-36 under 35 USC § 103(a) as being unpatentable over Berger in view of Fossum. Applicant traverses these rejections and requests reconsideration of the application.

### **102(b) Rejections**

When evaluating a claim, the claim as a whole must be considered, and as such, every limitation in the claim must be considered. MPEP § 2106. In order for a reference to anticipate an invention, each and every element of the claimed invention must be found in a single reference. "The identical invention must be shown in as complete detail as is contained in the ... claim." MPEP § 2131.

### **102(b) Rejection – Berger**

Independent claims 5 and 8 recite "a select switch used to control which column circuit a particular signal from a light receiving element is stored, wherein a color difference readout signal is output when a reset signal for at least one column circuit is obtained by sampling the signal of one color and the light

signal level for that column circuit is obtained by sampling the signal of a different color.” Nothing found in Berger teaches this aspect of the claimed invention. Therefore, for at least this reason, Berger does not anticipate Applicant’s independent claims 5 and 8.

“Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim.” 37 CFR § 1.75. Claim 6 depends from and include all of the limitations of independent claim 5, while claim 9 depends from and includes all of the limitations of independent claim 8. For at least the reason discussed above, Berger does not anticipate independent claims 5 and 8. Accordingly, dependent claims 6 and 9 are also not anticipated by Berger.

Independent claims 11 and 26 recite “at least two signal storage banks comprised of individual signal storage elements; each of the at least two storage banks having enough individual storage elements to store the signals from at least one row of light receiving elements in the array, wherein multiple samples of each signal from at least one row of light receiving elements are concurrently stored in different individual signal storage elements.” Nothing found in Berger teaches this aspect of the claimed invention. Therefore, for at least this reason, Berger does not anticipate Applicant’s independent claims 11 and 26.

“Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim.” 37 CFR § 1.75. Claims 12-17 depend from and include all of the limitations of independent claim 11, while claims 27-32 depend from and includes all of the limitations of independent claim 26. For at least the reason discussed above, Berger does not anticipate independent claims 11 and 26. Accordingly, dependent claims 12-17 and 27-32 are also not anticipated by Berger.

#### 102(b) Rejection - Fossum

Independent claims 22 and 37 recite “a plurality of charge to voltage conversion regions; wherein at least two adjacent light receiving elements

share a charge to voltage conversion region.” As depicted in figure 7, and described in lines 5-17 on page 10 of Applicant’s specification, photodetectors PD1, PD2, PD3, PD4 share the charge-to-voltage conversion region or floating diffusion 190, reset transistor 200 with the reset gate 210, source follower input transistor 220, row select transistor 230, and output signal line 240.

The Examiner argues Fossum teaches “a plurality of charge to voltage conversion regions; wherein at least two adjacent light receiving elements share a charge to voltage conversion region.” in lines 14-40 in column 11. Lines 14-40 in column 11 state:

The column parallel approach accesses each pixel in the array 602 through conventional row and column selection circuitry 606. The row and column selection circuitry 606 switches the outputs from a row of the array 602, or a portion thereof, to the multiresolution circuitry 604 connected at the bottom of each column. The multiresolution readout circuitry 604 includes a column averaging section 608 connected to the array 602 and a row averaging section 610 connected to the column averaging section 608.

The preferred structure that is used to average the outputs of a block of pixels in the array 602 is shown in FIG. 8. The following assumes an example in which the array 602 is to be divided into a series of adjacent 3.times.3 pixel blocks 603. A first row of pixels 606a is read out and every three pixels grouped is averaged together in the column averaging circuit 608. These 3-pixel averages are stored in the row averaging section 610. This process is repeated from the next two consecutive rows 606b, 606c to get a total of three rows of information now stored in the row averaging circuit.

The row averaging section 610 calculates and outputs an average of the three inputs for each block. This average, therefore, is an average readout for each of the 3.times.3 blocks for the first three rows 606a-c. The output of the row averaging section 610 is

received by a conventional multiplexer 612 which can either provide a serial or parallel readout, as desired.

Nothing found in these paragraphs from Fossum discloses two or more adjacent light receiving elements sharing a charge to voltage conversion region. Applicant respectfully submits Fossum does not disclose "a plurality of charge to voltage conversion regions; wherein at least two adjacent light receiving elements share a charge to voltage conversion region." Therefore, for at least the following reason, Fossum does not anticipate Applicant's independent claims 22 and 37.

"Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim." 37 CFR § 1.75. Claims 23-25 depend from and include all of the limitations of independent claim 22, while claims 38-40 depend from and includes all of the limitations of independent claim 37. For at least the reason discussed above, Fossum does not anticipate independent claims 22 and 37. Accordingly, dependent claims 23-25 and 38-40 are also not anticipated by Fossum.

#### 103(a) Rejection

The Manual of Patent Examining Procedure states the following in Section 2143:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Applicant submits the combination of Berger and Fossum does not render Applicant's claims 7, 10, 18-21 and 33-36 obvious because the combination does not meet the three basic criteria. The argument below, however, will focus on the third criterion.

Applicant's arguments with respect to Berger apply to this rejection as well. Berger does not disclose or suggest "a select switch used to control which column circuit a particular signal from a light receiving element is stored, wherein a color difference readout signal is output when a reset signal for at least one column circuit is obtained by sampling the signal of one color and the light signal level for that column circuit is obtained by sampling the signal of a different color." And Fossum does not make up for the deficiencies of Berger. Since neither Berger nor Fossum teach or suggest "a select switch used to control which column circuit a particular signal from a light receiving element is stored, wherein a color difference readout signal is output when a reset signal for at least one column circuit is obtained by sampling the signal of one color and the light signal level for that column circuit is obtained by sampling the signal of a different color", the combination of Berger and Fossum does not teach or suggest all of the claim limitations in Applicant's independent claims 5 and 8. Therefore, for at least the following reason, the combination of Berger and Fossum does not render independent claims 5 and 8 obvious.

Claims 7 and 10 depend from independent claims 5 and 8, respectively. "If an independent claim is not rendered obvious by prior art, then any claim depending from the independent claim is not obvious. " In re Fine, 5 USPQ2d 1596 (Fed. Cir. 1988) (see also M.P.E.P. § 2143.03). Since the combination of Berger and Fossum does not render independent claims 5 and 8 obvious, dependent claims 7 and 10 are also not obvious in view of Berger and Fossum.

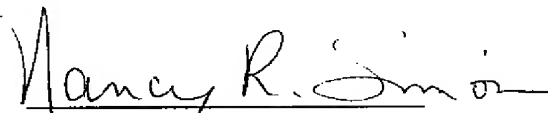
Additionally, Berger does not disclose or suggest "at least two signal storage banks comprised of individual signal storage elements; each of the at least two storage banks having enough individual storage elements to store the signals from at least one row of light receiving elements in the array, wherein multiple samples of each signal from at least one row of light receiving elements are concurrently stored in different individual signal storage elements." And Fossum does not make up for the deficiencies of Berger. Since neither Berger nor Fossum teach or suggest "at least two signal storage banks comprised of individual signal storage elements; each of the at least two storage banks having

enough individual storage elements to store the signals from at least one row of light receiving elements in the array, wherein multiple samples of each signal from at least one row of light receiving elements are concurrently stored in different individual signal storage elements.”, the combination of Berger and Fossum does not teach or suggest all of the claim limitations in Applicant’s independent claims 11 and 26. Therefore, for at least the following reason, the combination of Berger and Fossum does not render independent claims 11 and 26 obvious.

Claims 18-21 depend from independent claim 11, while claims 33-36 depend from independent claim 26. "If an independent claim is not rendered obvious by prior art, then any claim depending from the independent claim is not obvious. " In re Fine, 5 USPQ2d 1596 (Fed. Cir. 1988) (see also M.P.E.P. § 2143.03). Since the combination of Berger and Fossum does not render independent claims 11 and 26 obvious, dependent claims 18-21 and 33-36 are also not obvious in view of Berger and Fossum.

In view of the foregoing it is respectfully submitted that the claims in their present form are in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.